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REMARKS

This response is a full and complete response to the final Office Action mailed July 27, 2005. In the Office Action, the Examiner notes that claims 1-22 are pending of which claims 1-13 and 15-22 are rejected, and claim 14 is objected to. By this response, Applicants have herein amended claims 7-10 and 13-14. Claims 1-6, 11, and 19-21 continue unamended. No new matter has been entered.

In view of both the amendments presented above and the following discussion, Applicants submit that none of the claims now pending in the application are anticipated or obvious under the respective provisions of 35 U.S.C. §102 and §103. Therefore, Applicants believe that this application is now in condition for allowance.

It is to be understood that Applicants, by amending the claims, do not acquiesce to the Examiner's characterizations of the art of record or to Applicants' subject matter recited in the pending claims. Further, Applicants are not acquiescing to the Examiner's statements as to the applicability of the art of record to the pending claims by filing the instant responsive amendment.

35 U.S.C. §102

Claims 1-7, 9-11, 13-14, and 19-21

The Examiner has rejected claims 1-7, 9-11, 13-14, and 19-21 under 35 U.S.C. §102 as being anticipated by Wolf et al. (US patent 6,463,508, issued October 8, 2002, hereinafter "Wolf"). Applicants respectfully traverse the rejection.

In general, Wolf teaches a method for caching media streams at proxy servers. As blocks associated with a media stream are received by a proxy server, the blocks are grouped into segments by the proxy server, where the cache admission and replacement policies attach a different caching value to different segments. (Wolf, Abstract). In particular, Wolf teaches that a media object is divided into transmission packets, and the transmission packets are grouped into segments such that the size of a current segment is always twice the size of a previous segment. (Wolf, Col. 8, Lines 30-39).

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Wolf, however, fails to teach or suggest each and every element of Applicants' invention of at least claim 1. Namely, Wolf fails to teach or suggest at least the limitations of "segmenting the streaming multimedia clip into a plurality of data segments of exponentially increasing size, and distributing the plurality of data segments from the origin server to said plurality of streaming caches, wherein an i-th data segment is distributed in an i-th distribution round to each of said plurality of streaming caches," as taught in Applicants' invention of at least claim 1. Specifically, Applicants' claim 1 positively recites:

"1. In a network, a method for segmenting a streaming multimedia clip into a plurality of sequentially organized data segments of exponentially increasing size and distributing said streaming multimedia clip from an origin server to a plurality of streaming caches which comprise a distribution set in said network, the method comprising the steps of:
determining a size (L) of the multimedia clip;
segmenting the streaming multimedia clip into a plurality of data segments of exponentially increasing size; and
distributing the plurality of data segments from the origin server to said plurality of streaming caches, wherein an i-th data segment is distributed in an i-th distribution round to each of said plurality of streaming caches."
(Emphasis added.)

Applicants' invention of at least claim 1 teaches that the segmenting of the media clip is accomplished by dividing the multimedia clip into segments. The segments are then distributed from the origin server to each of a plurality of streaming caches. As such, Applicants' invention of at least claim 1 teaches segmentation of a multimedia clip at an origin server. The distribution of the segments from the origin server to the plurality of streaming caches is performed after segmenting of the multimedia clip. Furthermore, the distribution of the segments from the origin server to each of the plurality of streaming caches is performed over a number of distribution rounds such that an i-th data segment is distributed to each of said plurality of streaming caches in an i-th distribution round.

By contrast, Wolf teaches segmentation of a multimedia clip at a proxy server. As taught in Wolf, a media object is composed of "multiple media blocks which are the atomic units of transfer over the network." (Wolf, Col. 4, Lines 3-4). The media blocks are transmitted from a content server to a proxy server. In other words, a

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media object is packetized in equal-sized packets for transmission from a content server to a proxy server on which the media object is segmented and cached. In particular, Wolf states that the media blocks of a media object that are received at a proxy server "are grouped into segments by the proxy servers."

The segmentation of a media object by a proxy server (after transmission of the media object to the proxy server), as taught in Wolf, is simply not segmentation of a multimedia clip by an origin server (prior to distribution of the multimedia clip to the streaming cache), as taught in Applicants' invention of at least claim 1. Moreover, the distribution of an entire media clip from an origin server to a single proxy server to enable segmentation to be performed on the single proxy server, as taught in Wolf, is simply not segmentation of a media clip on an origin server for distribution to a plurality of streaming caches, as taught in Applicants' invention of at least claim 1.

Furthermore, segmentation of a multimedia clip in accordance with Applicants' invention of at least claim 1 is different from segmentation of a media object as taught in Wolf. Wolf teaches that a media object is divided into media object blocks (i.e., packets) for transmission from an origin server to a proxy server. After being received by the proxy server, the media object blocks are grouped together to form segments of increasing size. In particular, Wolf specifically states that "[i]n the current invention, blocks received for a media stream are grouped into segments by the proxy servers." (Wolf, Col. 2, Lines 28-30). As such, Wolf teaches grouping packets to form segments. The grouping, on a proxy server, of packets transmitted from an origin content server to the proxy server to form segments, as taught in Wolf, is simply not the division, on an origin server, of a media clip to form segments, as taught in Applicants' invention of at least claim 1.

Moreover, Wolf teaches two forms of information distribution; however, neither information distribution method of Wolf teaches or suggests "distributing the plurality of data segments from the origin server to said plurality of streaming caches, wherein an i-th data segment is distributed in an i-th distribution round to each of said plurality of streaming caches," as taught in Applicants' invention of at least claim 1. First, Wolf teaches distribution of media object blocks from an origin server to proxy servers

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prior to segmentation of the media object by the proxy servers. The distribution of packets of data prior to the grouping of those packets to form segments, as taught in Wolf, is simply not distribution of segments, as taught in Applicants' invention of at least claim 1. Second, Wolf teaches distribution of segments from a proxy server to a node, e.g., a user device, requesting the media object. The distribution of segments from a proxy server to a user device for displaying the associated media object to a user, as taught in Wolf, is simply not distribution of a plurality of data segments from an origin server to a plurality of streaming caches, as taught in Applicants' invention of at least claim 1.

In fact, since the media clips in Wolf are distributed prior to segmenting, and the distribution of segments from a proxy server to a user device must be performed such that the media object may be played to a user, there is absolutely no need in Wolf for distribution rounds as taught in Applicants' invention. Wolf is completely devoid of any teaching or suggestion of distribution rounds for distributing segments of a multimedia clip, as taught in Applicants' invention of at least claim 1. As such, Wolf fails to teach or suggest "distributing the plurality of data segments from the origin server to said plurality of streaming caches, wherein an i-th data segment is distributed in an i-th distribution round to each of said plurality of streaming caches," as taught in Applicants' invention of at least claim 1. As such, Wolf fails to teach or suggest each and every element of Applicants' invention of at least claim 1.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)(citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). The Wolf reference fails to disclose each and every element of the claimed invention, as arranged in the claim.

As such, Applicants submit that independent claim 1 is not anticipated and fully satisfies the requirement of the 35 U.S.C. §102 and is patentable thereunder. Furthermore, independent claims 13 and 19 recite features similar to the features of independent claim 1. As such, and for at least the same reasons discussed above,

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Applicants submit that these independent claims are also not anticipated and fully satisfy the requirements of the 35 U.S.C. §102 and are patentable thereunder.

Moreover, claims 2-11, 14, and 20-21 depend, either directly or indirectly, from independent claims 1, 13 and 19 and recite additional features therefor. As such, and for at least the same reasons discussed above, Applicants submit that these dependent claims are also not anticipated and fully satisfy the requirements of the 35 U.S.C. §102 and are patentable thereunder. Therefore, Applicants respectfully request that the rejection be withdrawn.

35 U.S.C. §103

Claim 8

The Examiner has rejected claim 8 under 35 U.S.C. §103 as being obvious over Wolf et al. (US patent 6,463,508, issued October 8, 2002, hereinafter "Wolf") in view of Eberman et al (US patent 6,173,287, issued January 9, 2001, hereinafter "Eberman"). Applicants respectfully traverse the rejection.

Claim 8 depends from claim 1 and recites additional limitations therefor. As discussed above, Wolf fails to teach or suggest Applicants' invention of claim 1, as a whole. Namely, Wolf fails to teach or suggest at least the limitations of "segmenting the streaming multimedia clip into a plurality of data segments of exponentially increasing size, and distributing the plurality of data segments from the origin server to said plurality of streaming caches, wherein an i-th data segment is distributed in an i-th distribution round to each of said plurality of streaming caches," as taught in Applicants' invention of at least claim 1. Furthermore, Eberman fails to bridge the substantial gap between Wolf and Applicants' invention of claim 1.

In general, Eberman teaches a technique for accessing an item of interest within a particular one of a plurality of stored representations of data. In particular, a processing device searches a plurality of stored annotations corresponding to different items within the plurality of stored representations. (Eberman, Abstract). Eberman, however, is completely devoid of any teaching or suggestion of at least the limitations of "segmenting the streaming multimedia clip into a plurality of data segments of exponentially increasing size, and distributing the plurality of data

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segments from the origin server to said plurality of streaming caches, wherein an i-th data segment is distributed in an i-th distribution round to each of said plurality of streaming caches," as taught in Applicants' invention of at least claim 1.

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). Thus, it is impermissible to focus either on the "gist" or "core" of the invention, Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 230 USPQ 416, 420 (Fed. Cir. 1986) (emphasis added). Wolf and Eberman, either alone or in combination, fail to teach or suggest Applicants' invention as a whole.

As such, Applicants submit that independent claim 1 is not obvious and fully satisfies the requirements of the 35 U.S.C. §103 and is patentable thereunder. Furthermore, since claim 8 depends from claim 1, Applicants submit that dependent claim 8 is also not obvious and fully satisfies the requirements of the 35 U.S.C. §103 and is patentable thereunder. Therefore Applicants respectfully request that the rejection be withdrawn.

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CONCLUSION

Thus, Applicants submit that the pending claims are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Eamon J. Wall at (732) 383-1438 or Mr. Michael Bentley at (732) 383-1434 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

9/26/05

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